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JCO2 Rec'd PCT/PTO 29 MAR 2002

FORM PTO-1390 (REV. 9-2001)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER 20496-327	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				U.S. APPLICATION NO. (If known, see 37 CFR 1.5)	
				10/089387	
INTERNATIONAL APPLICATION NO. PCT/EP00/09572		INTERNATIONAL FILING DATE 29 September 2000		PRIORITY DATE CLAIMED 1 October 1999	
TITLE OF INVENTION FLAT GABLE COMPOSITE PACKING PROVIDED WITH A RESEALABLE SPOUT...					
APPLICANT(S) FOR DO/EO/US Hans BÖMER, et al.					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:					
<p>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</p> <p>4. <input type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (Article 31).</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</p> <p style="margin-left: 20px;">b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.</p> <p style="margin-left: 20px;">c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> is attached hereto.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</p> <p>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> have been communicated by the International Bureau.</p> <p style="margin-left: 20px;">c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p style="margin-left: 20px;">d. <input type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).</p> <p>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p> <p>Items 11 to 20 below concern document(s) or information included:</p> <p>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p>13. <input checked="" type="checkbox"/> A FIRST preliminary amendment.</p> <p>14. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.</p> <p>15. <input type="checkbox"/> A substitute specification.</p> <p>16. <input type="checkbox"/> A change of power of attorney and/or address letter.</p> <p>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.</p> <p>18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).</p> <p>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. <input checked="" type="checkbox"/> Other items or information:</p> <p style="margin-left: 20px;">1. PCT International Search Report (in German and English)</p> <p style="margin-left: 20px;">2. PCT International Preliminary Examination Report (in German)</p> <p style="margin-left: 20px;">Express Mail Label No. EL616646399US</p>					

U.S. APPLICATION NO. (if known) 10/089387 INTERNATIONAL APPLICATION NO. PCT/EP00/09572	ATTORNEY'S DOCKET NUMBER 20496-327	
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21. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)): Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1040.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$890.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$740.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$710.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 ENTER APPROPRIATE BASIC FEE AMOUNT =	CALCULATIONS PTO USE ONLY
ENTER APPROPRIATE BASIC FEE AMOUNT =	\$ 890.00

Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Total claims	19 - 20 =	0	x \$18.00	\$	
Independent claims	2 - 3 =	0	x \$84.00	\$	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)				\$	
				+	
TOTAL OF ABOVE CALCULATIONS =				\$	890.00
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				\$	-
SUBTOTAL =				\$	890.00
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	
TOTAL NATIONAL FEE =				\$	890.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +				\$	
TOTAL FEES ENCLOSED =				\$	890.00
				Amount to be refunded:	\$
				charged:	\$

a. ☐ A check in the amount of \$ _____ to cover the above fees is enclosed.

b. ☒ Please charge my Deposit Account No. **16-2500** in the amount of \$ **890.00** to cover the above fees.
 A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any
 overpayment to Deposit Account No. **16-2500**. A duplicate copy of this sheet is enclosed.

d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card
 information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR
 1.137 (a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO: Proskauer Rose LLP Patent Department 1585 Broadway New York, NY 10036	<div style="text-align: center;"> </div> <hr/> SIGNATURE Rachel S. Watt Patent Agent <hr/> NAME <hr/> <div style="text-align: right;"> 46,186 <hr/> REGISTRATION NUMBER </div>
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Date: 29 March 2002

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46,186

 REGISTRATION NUMBER

10039 10/089387

JC13 Rec'd PCT/PTO 29 MAR 2002

Attorney Docket No. : 20496-327

IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

Applicant	:	Hans BÖMER, et al.
Int'l Appl. No.	:	PCT/EP00/09572
Int'l. Filing Date	:	29 September 2000
Priority Date	:	1 October 1999
Title of the Invention	:	FLAT GABLE COMPOSITE PACKING PROVIDED WITH A RESEALABLE SPOUT AND PROCEDURE FOR ITS MANUFACTURE (as amended)

**PRELIMINARY
AMENDMENT**

Express Mail Mailing Label No. :

<u>EL616646399US</u>

Assistant Commissioner for Patents
Box PCT
Washington, DC 20231

Sir:

Prior to examination, please amend the above-identified patent application as follows:

IN THE TITLE

Please change the title to read:

“FLAT GABLE COMPOSITE PACKING PROVIDED WITH A RESEALABLE
SPOUT AND PROCEDURE FOR ITS MANUFACTURE,”

as noted above.

IN THE SPECIFICATION:

Page 1, after the title, please insert --BACKGROUND OF THE INVENTION--.

Page 2, before the second full paragraph, which begins with "Proceeding from the above," please insert --SUMMARY OF THE INVENTION--.

Page 8, before the second full paragraph, which begins with "The invention will be," please insert --BRIEF DESCRIPTION OF THE DRAWINGS--.

Page 8, before the last full paragraph, which begins with "Fig. 1 shows," please insert --DETAILED DESCRIPTION OF THE INVENTION--.

IN THE CLAIMS:

Please amend claims 3, 5-7, and 9-19 to remove their multiple dependencies. A "marked-up" version of the amended claims is enclosed herewith in accordance with 37 C.F.R. 1.121 (c)(1).

3. (Amended) Flat gable composite packing according to claim 1, wherein the opening element (4, 4') is sharp-edged on its edges pointing toward the inner PE layer.
5. (Amended) Flat gable composite packing according to claim 1, wherein the opening element or sealing element (4, 4', 4' ') is designed as a plate (7, 7', 7' ') attached flat to the packing interior.
6. (Amended) Flat gable packing according to claim 1, wherein the connecting element (5, 5') is molded onto the opening element (4, 4', 14) as a single piece.

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7. (Amended) Flat gable packing according to claim 1, wherein the cap (2) has a recess (8) to receive the end of the connecting element (5, 5') facing the cap (2).
9. (Amended) Flat gable packing according to claim 1, wherein the connecting element (5, 5') is molded onto the cap (2) as a single piece.
10. (Amended) Flat gable packing according to claim 1, wherein a pin is provided as the connecting element (5).
11. (Amended) Flat gable packing according to claim 1, wherein a web is provided as the connecting piece (5').
12. (Amended) Flat gable packing according to claim 1, wherein the connecting element (5, 5') has a cross section designed as a barb for the form-fitting connection of the opening element (4, 4', 14) with the cap (2).
13. (Amended) Flat gable packing according to claim 1, wherein the connecting element (5, 5') is positively or non-positively bonded with the cap (2) via thermal treatment.
14. (Amended) Flat gable packing according to claim 1, wherein the connecting element (5, 5') is slit at least in a plane perpendicular to the sealed cap (2) on its end facing the cap (2).
15. (Amended) Flat gable packing according to claim 1, wherein an "originality seal" (10) is provided between the flange (3) and cap (2) of the spout element (1), which is broken when the cap (2) is initially opened.

16. (Amended) A procedure for manufacturing a flat gable composite packing according to claim 1, comprising the steps of:
- Manufacturing the casting opening in the carrier layer,
 - Coating the casting opening with the outer PE layer, the oxygen barrier layer and the inner PE layer,
 - Molding on the packing floor,
 - Puncturing the film layers covering the casting openings with the connecting element (5, 5'),
 - Connecting the opening element (4, 4') with the inner PE layer,
 - Securing the spout element (1) and connecting the cap (2) with the opening element (4, 4') by means of the connecting element (5, 5'), and
 - Folding and sealing the packing gable after filling.
17. (Amended) Procedure for manufacturing a flat gable composite packing according to claim 4, comprising the steps of:
- Coating the carrier layer with the outer PE layer, the oxygen barrier layer and inner layer,
 - Manufacturing the casting opening in the area of the packing gable,
 - Molding on the packing floor,
 - Securing the spout element (1) and sealing element (4' '), and connecting the cap (2) with the opening element (14) by means of the connecting element (5, 5'), and
 - Folding and sealing the packing gable after filling.
18. (Amended) Procedure according to claim 16, wherein the connecting element (5, 5') latches with the cap (2) while applying the spout element (1).
19. (Amended) Procedure according to claim 16, wherein the connecting element (5, 5') is bonded with the cap (2) via thermal deformation.

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IN THE ABSTRACT

Please delete the last line which recites: "Fig. 3 is intended for the Abstract."

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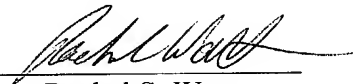
REMARKS

Amendments are being made to the Specification to provide headings and to the Abstract to conform with accepted U.S. practice. The claims are amended to remove multiple dependencies and to further clarify the invention. No new matter has been added.

Please proceed to examine the application as amended herein.

Respectfully submitted,
PROSKAUER ROSE LLP
Attorneys for Applicant(s)

Date: March 29, 2002

By 

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Amended Claims - Marked-Up Version

3. (Amended) Flat gable composite packing according to claim 1 [or 2, characterized in that], wherein the opening element (4, 4') is sharp-edged on its edges pointing toward the inner PE layer.
5. (Amended) Flat gable composite packing according to claim 1, wherein [one of claims 1 to 4, characterized in that] the opening element or sealing element (4, 4', 4' ') is designed as a plate (7, 7', 7' ') attached flat to the packing interior.
6. (Amended) Flat gable packing according to claim 1, wherein [one of claims 1 to 5, characterized in that] the connecting element (5, 5') is molded onto the opening element (4, 4', 14) as a single piece.
7. (Amended) Flat gable packing according to claim 1, wherein [one of claims 1 to 6, characterized in that] the cap (2) has a recess (8) to receive the end of the connecting element (5, 5') facing the cap (2).
9. (Amended) Flat gable packing according to claim 1, wherein [one of claims 1 to 5, characterized in that] the connecting element (5, 5') is molded onto the cap (2) as a single piece.
10. (Amended) Flat gable packing according to claim 1, wherein [one of claims 1 to 9, characterized in that] a pin is provided as the connecting element (5).
11. (Amended) Flat gable packing according to claim 1, wherein [to one of claims 1 to 9, characterized in that] a web is provided as the connecting piece (5').
12. (Amended) Flat gable packing according to claim 1, wherein [one of claims 1 to 11, characterized in that] the connecting element (5, 5') has a cross section designed as a barb for the form-fitting connection of the opening element (4, 4', 14) with the cap (2).

13. (Amended) Flat gable packing according to claim 1, wherein [one of claims 1 to 12, characterized in that] the connecting element (5, 5') is positively or non-positively bonded with the cap (2) via thermal treatment.
14. (Amended) Flat gable packing according to claim 1, wherein [one of claims 1 to 13, characterized in that] the connecting element (5, 5') is slit at least in a plane perpendicular to the sealed cap (2) on its end facing the cap (2).
15. (Amended) Flat gable packing according to claim 1, wherein [one of claims 1 to 14, characterized in that] an "originality seal" (10) is provided between the flange (3) and cap (2) of the spout element (1), which is broken when the cap (2) is initially opened.
16. (Amended) A procedure for manufacturing a flat gable composite packing according to claim 1, comprising the steps of [one of claims 1 to 3 or 5 to 15, characterized by the following steps]:
 - Manufacturing the casting opening in the carrier layer,
 - Coating the casting opening with the outer PE layer, the oxygen barrier layer and the inner PE layer,
 - Molding on the packing floor,
 - Puncturing the film layers covering the casting openings with the connecting element (5, 5'),
 - Connecting the opening element (4, 4') with the inner PE layer,
 - Securing the spout element (1) and connecting the cap (2) with the opening element (4, 4') by means of the connecting element (5, 5'), and
 - Folding and sealing the packing gable after filling.

17. (Amended) Procedure for manufacturing a flat gable composite packing according to claim 1, comprising the steps of [one of claims 4 to 15, characterized by the following steps]:
 - Coating the carrier layer with the outer PE layer, the oxygen barrier layer and inner layer,
 - Manufacturing the casting opening in the area of the packing gable,
 - Molding on the packing floor,
 - Securing the spout element (1) and sealing element (4' '), and connecting the cap (2) with the opening element (14) by means of the connecting element (5, 5'), and
 - Folding and sealing the packing gable after filling.
18. (Amended) Procedure according to claim 16, wherein [or 17, characterized in that] the connecting element (5, 5') latches with the cap (2) while applying the spout element (1).
19. (Amended) Procedure according to claim 16, wherein [one of claims 16 to 18, characterized in that] the connecting element (5, 5') is bonded with the cap (2) via thermal deformation.

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FLAT GABLE COMPOSITE PACKING PROVIDED WITH A RESEALABLE
SPOUT AND PROCEDURE FOR ITS MANUFACTURE

The invention relates to a flat gable composite packing, in particular a square lug packing, wherein the composite has at least one carrier layer made out of paper or cardboard, a coupling agent layer, an oxygen barrier layer, preferably made out of aluminum, and a bilateral plastic coating made out of polyethylene (PE), with a casting opening provided in the packing gable, and with a resealable spout element, which has a flange and a cap connected thereto, whose flange enveloping the casting opening is rigidly bonded with the packing surface, as well as a procedure for manufacturing such a flat gable composite packing.

The casting opening is normally a covered casting opening provided in the packing gable, or a casting opening stamped out in the area of the packing gable.

Flat gable composite packings are known in numerous designs. They are primarily used in the area of liquids packaging in conjunction with cold, cold-sterile, hot and aseptic filling. These packings are partially provided with spout elements sealed onto the gables, which are designed to be resealable with a cap. For opening such packings for the first time, it is known to provide an opening element sealed onto the composite piece, which forms an opening surface that generates a casting opening after opened.

In the flat gable composite packing known from DE 44 09 945 A1, it was proposed that a notch circling the

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opening surface be provided, and that an opening aid be non-positively secured inside the notch for withdrawing the composite pieces forming the opening surface and enveloped by the notch. However, the flat gable composite packing described above needs improvement in several areas. On the one hand, it is conceivable that the non-positive connection of the opening aid and composite piece most often designed as a seal might become weakened or even broken by stresses during the transport of the packing. As a result, it would no longer be possible to open the described packing with the opening aid.

In addition, the described packing provides that the composite material forming the opening surface be completely removed by means of the opening aid. This results in a throwaway part already during the first step of opening the flat gable composite packing that must be separately disposed of.

Proceeding from the above, the object of the present invention is to design and develop further a flat gable composite packing of the kind described at the preamble, along with a procedure for its manufacture, in such a way as to enable a reliable opening of the packing.

In terms of the flat gable composite packing, the object is achieved by virtue of the fact that, in a flat gable composite packing according to the preamble of claim 1, an opening element attached to the packing interior can be bonded with the cap to form an undetachable unit by means of a connecting element that penetrates the coated casting opening.

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places the focus on user wishes relating not just to hygiene, but to aesthetics as well.

As an alternative, it is possible to design the opening element to be enveloped by a weakening line in a sealing element, whose surface is greater than that of the casting opening, wherein the surface of the opening element corresponds to that of the stamped-out casting opening. In such a design of the opening element, the opening element breaks out of the sealing element along the weakening line during initial opening, and is pulled out of the packing. The remainder of the sealing element remains as a ring enveloping the casting opening in the packing.

The manufacture of the resealable spout element is simplified by virtue of the fact that the connecting element is molded onto the opening element as a single piece. However, it is also possible to mold the connecting element to the cap as a single piece. It is also advantageous for the cap to have a recess to receive the end of the connecting element facing the cap. This design simplifies the bonding of the connecting element with the cap.

It has proven advantageous for reliably opening the casting opening with the opening element if the recess provided in the cap is arranged closer to the actuating side of the cap than to the site where the cap is hinged to the spout element. As a result of this design, the forces introduced into the film layers by the opening element given a covered casting opening are greater than if the recess were to be located in the middle of the

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cap. When the flat gable composite packing is designed with a stamped out casting opening sealed by the opening element, this arrangement of the connecting element enables a better detachment of the opening element from the sealing element.

It has proven to be particularly beneficial to design the connecting element as a pin or web. This makes it easier to puncture the film layers covering the casting opening with the connecting element, and connect the opening element with the cap by means of the connecting element, as described in the procedure according to the invention.

The connecting element is connected in a particularly effective manner with the cap if its free end is designed as a barb for the form-fitting connection of the opening element with the opening cover. This design allows the connecting element to positively latch with the cap while applying the spout element.

As an alternative or in addition, the connecting element can be positively or non-positively bonded with the cap via thermal treatment, to achieve a particularly reliable bond between the connecting element and the cap.

The connecting element can be easily introduced into the recess of the cap in particular when slit in a plane perpendicular to the sealed cover. As a result, the connecting element can be compressed on its end facing the cap, and hence be more easily introduced into the recess of the cap, in particular in the embodiment with a cross-section designed as a barb.

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The user is given special protection by providing an "originality seal" between the flange and cap of the spout element, which is broken when the cap is initially opened.

The invention will be described in greater detail below based on a drawing that depicts only an embodiment. The drawing shows:

Fig. 1 a cross section through a spout element according to the invention,

Fig. 2 a perspective depiction of the still unopened spout element according to Fig.1,

Fig. 3 a perspective depiction of the opened spout element according to Fig. 1,

Fig. 4A a first embodiment of the opening element,

Fig. 4B a second embodiment of the opening element,

Fig. 4C a third embodiment of the opening element, and

Fig. 5 a cross section through a spout element according to the invention with an opening element according to Fig. 4C.

Fig 1 shows a spout element 1 with a cap 2, a flange 3 and an opening element 4. The opening element 4 has a connecting element 5, whose end 6 facing the cap 2 has a head designed like a barb. The connecting element 5 is connected with a plate 7 of the opening element 4

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Fig. 4A shows a first configuration of an opening element 4 with a pin-shaped connecting element 5 molded onto the plate 7 as a single piece. The pin-shaped connecting element 5 has a conical incoming end 6, whose lower diameter is greater than the diameter of the pin-shaped connecting element 5, thereby performing the function of a barb.

Fig. 4B shows another configuration of an opening element 4' with a web-shaped connecting element 5' molded onto the plate 7' in a single piece. The web-shaped connecting element 5' has one end 6' whose cross section is shaped like a barb.

Fig. 4C shows an opening element 14 according to a third configuration of the invention, in which a plate 7'' designed as a sealing element 4'' has a weakening line 13 with the contour of the casting opening. Molded onto the plate 7'' is a pin-shaped connecting element 5, which has a conical incoming end 6'', whose lower diameter is greater than the diameter of the pin-shaped connecting element 5, thereby performing the function of a barb.

Keeping the same reference numbers from Fig. 1 for identical elements, Fig. 5 additionally shows an opening element 14 with a plate 7'' designed as a sealing element 4'' with a weakening line 13, which has the contour of the casting opening. The plate 7'' has a larger cross section than the casting opening, so that it overlaps the areas of the composite that envelop the casting opening. On the product side, the sealing element 4'' is provided with a gas or aroma barrier layer 16. When the spout element 1 is opened, the opening element 14 is broken out

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of the sealing element 4'' along the perforated line 13,
and pulled out of the packing, while the remaining
portion of the sealing element 13 remains behind as a
ring enveloping the casting opening.

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CLAIMS

1. A flat gable composite packing, in particular a square lug packing, wherein the composite has at least one carrier layer made out of paper or cardboard, a coupling agent layer, an oxygen barrier layer, preferably made out of aluminum, and a bilateral plastic coating made out of polyethylene (PE), with a coated casting opening provided in the packing gable, which forms a casting hole after penetration, and with a resealable spout element, which has a flange and a cap connected thereto, whose flange enveloping the casting opening is rigidly bonded with the packing surface, characterized in that an opening element (4, 4') attached to the packing interior can be bonded with the cap (2) to form an undetachable unit by means of a connecting element (5, 5') that penetrates the coated casting opening.
2. Flat gable composite packing according to claim 1, characterized in that the contour of the opening element (7, 7') essentially corresponds to the contour of the casting opening.
3. Flat gable composite packing according to claim 1 or 2, characterized in that the opening element (4, 4') is sharp-edged on its edges pointing toward the inner PE layer.
4. Flat gable composite packing, in particular a square lug packing, wherein the composite has at least one carrier layer made out of paper or cardboard, a

coupling agent layer, an oxygen barrier layer, preferably made out of aluminum, and a bilateral plastic coating made out of polyethylene (PE), with a casting opening stamped out in the area of the packing gable, and with a resealable spout element, which has a flange and a cap connected thereto, whose flange enveloping the casting opening is rigidly bonded with the packing surface, characterized in that a sealing element (4'') attached to the packing interior can be bonded with the cap (2) to form an undetachable unit by means of a connecting element (5, 5') in the area of the casting opening, that the sealing element (4'') has a larger surface than the casting opening, a weakening line (13) that corresponds to the contour of the casting opening and borders an opening element (14), and is provided with a product-side gas or aroma barrier layer (16), and that the opening element (14) is separated out of the sealing element (4'') on opening of the spout element (1).

5. Flat gable composite packing according to one of claims 1 to 4, characterized in that the opening element or sealing element (4, 4', 4'') is designed as a plate (7, 7', 7'') attached flat to the packing interior.
6. Flat gable packing according to one of claims 1 to 5, characterized in that the connecting element (5, 5') is molded onto the opening element (4, 4', 14) as a single piece.

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7. Flat gable packing according to one of claims 1 to 6, characterized in that the cap (2) has a recess (8) to receive the end of the connecting element (5, 5') facing the cap (2).
8. Flat gable packing according to claim 7, characterized in that the recess (8) is located nearer to the actuating side of the cap (2) than to the site where the cap (2) is hinged to the flange (3).
9. Flat gable packing according to one of claims 1 to 5, characterized in that the connecting element (5, 5') is molded onto the cap (2) as a single piece.
10. Flat gable packing according to one of claims 1 to 9, characterized in that a pin is provided as the connecting element (5).
11. Flat gable packing according to one of claims 1 to 9, characterized in that a web is provided as the connecting piece (5').
12. Flat gable packing according to one of claims 1 to 11, characterized in that the connecting element (5, 5') has a cross section designed as a barb for the form-fitting connection of the opening element (4, 4', 14) with the cap (2).
13. Flat gable packing according to one of claims 1 to 12, characterized in that the connecting element (5, 5') is positively or non-positively bonded with the cap (2) via thermal treatment.

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14. Flat gable packing according to one of claims 1 to 13, characterized in that the connecting element (5, 5') is slit at least in a plane perpendicular to the sealed cap (2) on its end facing the cap (2).
15. Flat gable packing according to one of claims 1 to 14, characterized in that an "originality seal" (10) is provided between the flange (3) and cap (2) of the spout element (1), which is broken when the cap (2) is initially opened.
16. A procedure for manufacturing a flat gable composite packing according to one of claims 1 to 3 or 5 to 15, characterized by the following steps:
 - Manufacturing the casting opening in the carrier layer,
 - Coating the casting opening with the outer PE layer, the oxygen barrier layer and the inner PE layer,
 - Molding on the packing floor,
 - Puncturing the film layers covering the casting openings with the connecting element (5, 5'),
 - Connecting the opening element (4, 4') with the inner PE layer,

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- Securing the spout element (1) and connecting the cap (2) with the opening element (4, 4') by means of the connecting element (5, 5'), and
 - Folding and sealing the packing gable after filling.
17. Procedure for manufacturing a flat gable composite packing according to one of claims 4 to 15, characterized by the following steps:
- Coating the carrier layer with the outer PE layer, the oxygen barrier layer and inner PE layer,
 - Manufacturing the casting opening in the area of the packing gable,
 - Molding on the packing floor,
 - Securing the spout element (1) and sealing element (4''), and connecting the cap (2) with the opening element (14) by means of the connecting element (5, 5'), and
 - Folding and sealing the packing gable after filling.
18. Procedure according to claim 16 or 17, characterized in that the connecting element (5, 5') latches with the cap (2) while applying the spout element (1).

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19. Procedure according to one of claims 16 to 18, characterized in that the connecting element (5, 5') is bonded with the cap (2) via thermal deformation.

PCT/EP00/09572

ABSTRACT

Proposed for a square flat gable composite packing are a resealable spout element (1) and the manufacture of a flat gable composite packing with such a spout element (1) that eliminate the disadvantage of known spout elements, namely that such packings can no longer be opened once the sealed-on opening aids for initially opening the packing lose their non-positive bond with the packing during transport or as the result of inadequate proposed, with a cap (2), in which an opening element (4) sealing. A resealable spout element (1) is attached to the packing interior can be bonded with the cap (2) to form an undetachable unit by means of a connecting element (5) that penetrates an opening surface present in the packing.

Fig. 3 is intended for the abstract.

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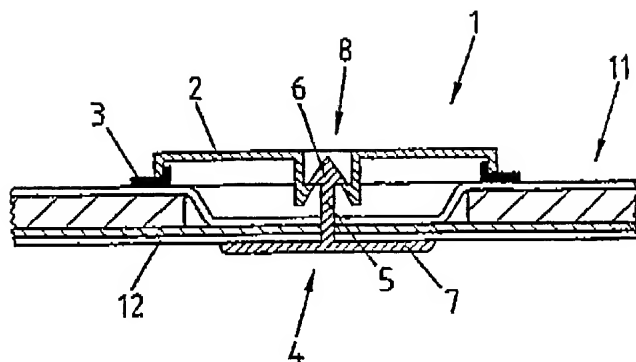


Fig. 1

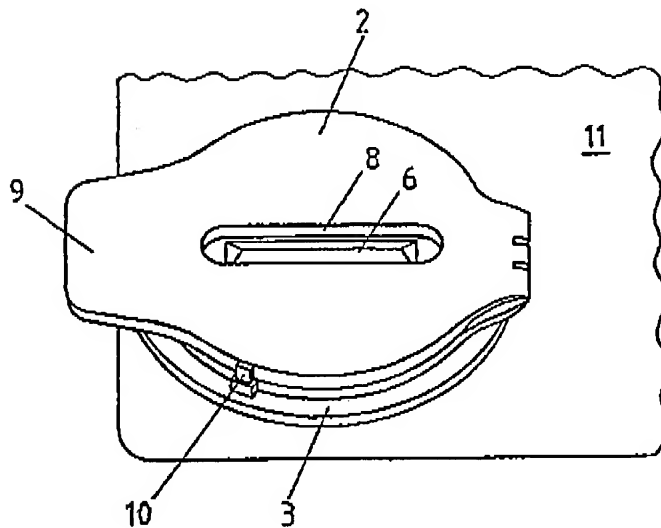


Fig. 2

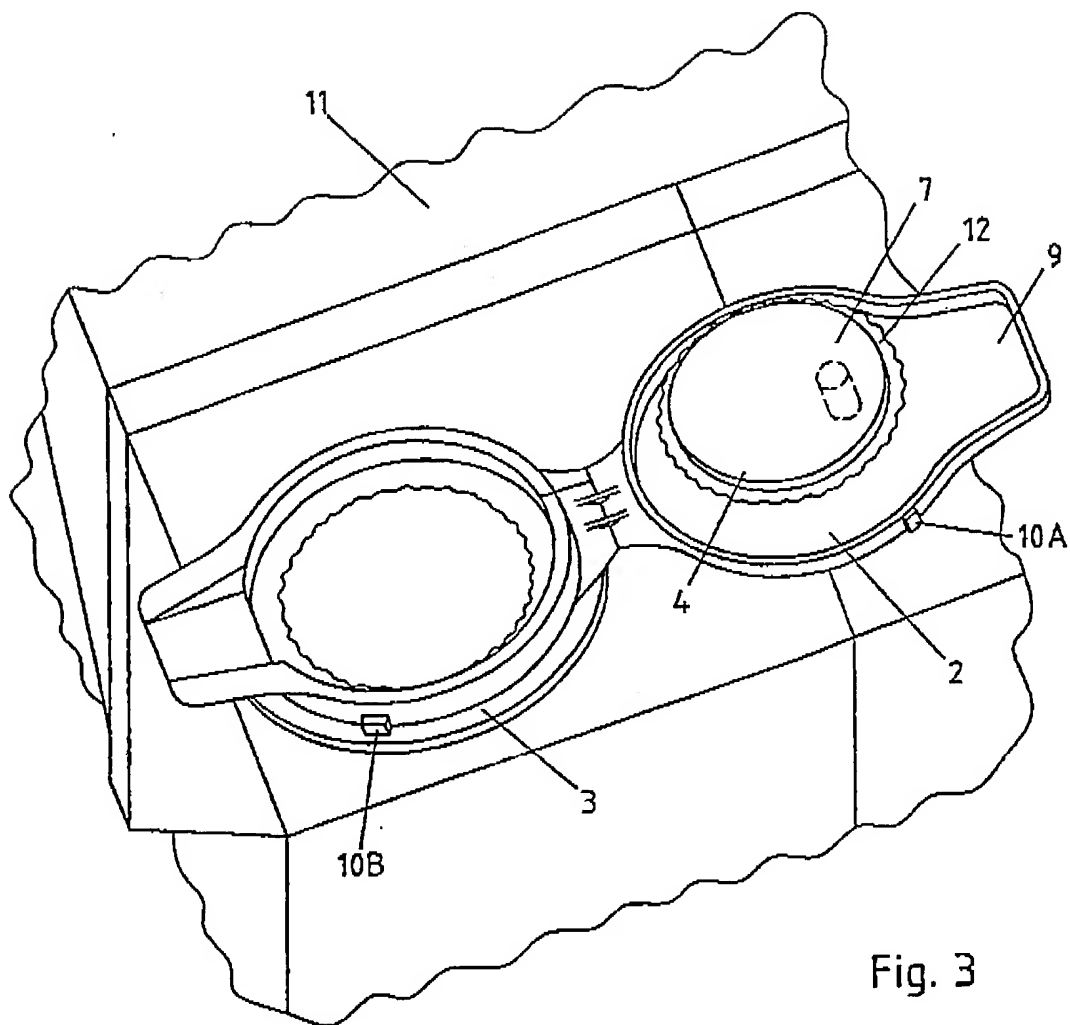


Fig. 3

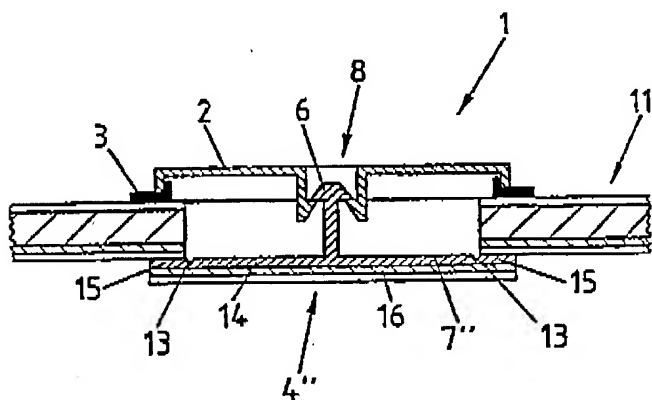


Fig. 5

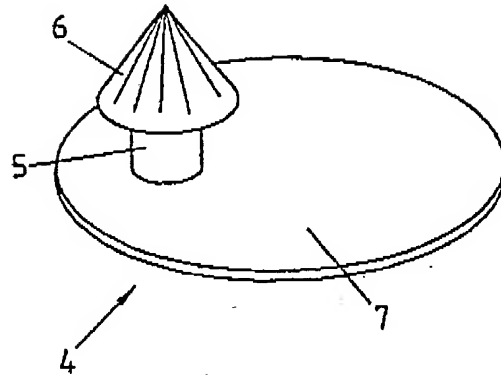


Fig. 4A

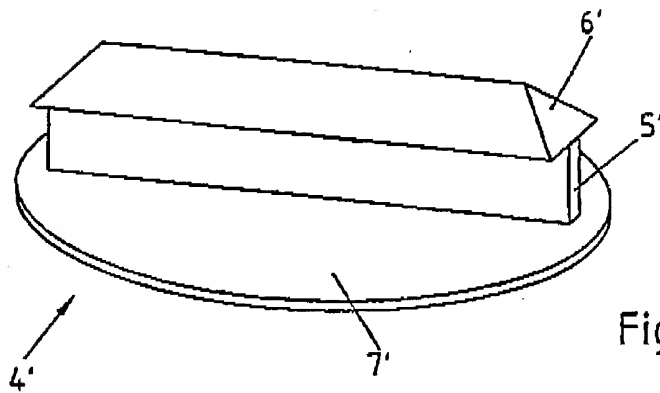


Fig. 4B

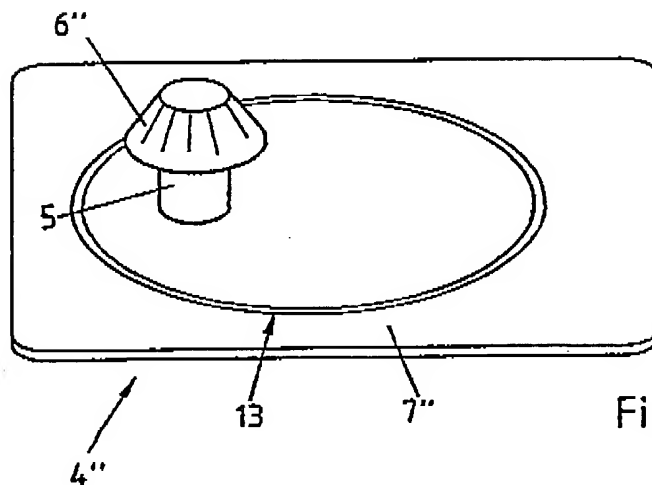


Fig. 4C



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Attorney Docket No.: 20496-327

DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter, which is claimed and for which a patent is sought on the invention entitled:

FLAT GABLE COMPOSITE PACKING PROVIDED WITH A RESEALABLE SPOUT AND PROCEDURE FOR ITS MANUFACTURE

the specification of which is attached hereto unless the following box is checked:

☒ was filed on September 29, 2000 as United States Application Number or PCT International Application Number PCT/EP00/09572 and was amended on March 29, 2002 (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified, by checking the box, any foreign application for patent or inventor's certificate, or PCT International Application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

199 47 296.3
(Number)

Germany
(Country)

1/10/1999
(Day/Month/Year Filed)

PCT/EP00/09572
(Number)

WIPO
(Country)

29/9/2000
(Day/Month/Year Filed)

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Ausdruckszeit 22. JAN. 14:13

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

(Application Number)

(Filing Date)

(Application Number)

(Filing Date)

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

(Application Number)

(Filing Date)

(Status--patented,
pending, abandoned)

(Application Number)

(Filing Date)

(Status--patented,
pending, abandoned)

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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AUSDRUCKSZEIT 22. JAN. 14:13

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